User Manual

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Prerequisites

Operating System Specification

This application requires a PC with:

- Microsoft® Windows® 7.0 **Professional**, **Enterprise** or **Ultimate**
- Microsoft® Windows® 8.0 **Pro or Enterprise**

The system requirements will vary depending on the number of cameras you wish to operate and record. Nano 4 for example, will require a much lower spec PC than Nano 20. Frame rate, Image resolution, network speed, scene will affect PC performance.

Minimum PC Specification

2 GHz or faster 32-bit (x86) or 64-bit (x64) processor, 2GB RAM with a minimum 500GB hard drive for recording.

Installation

Run the Windows Installer Package named **NanoSetup.exe** and follow the displayed instructions.

The Nano installer package prerequisites include:

- Microsoft Visuals C++ 2013
- Microsoft .NET 4.5.1
- Direct X 9

The Meyertech Decoder (H264/MJPEG) is also required for Nano to function. This will be included with the installer.

The program will require a valid license file to fully function. Without a license file Nano 9 & 20 will only operate with Nano 4 (Unlicensed) features. Please see licensing section below.

Licencing

Once Nano is installed on your workstation, a license file has to be issued. Without a license file, Nano will only offer limited functionality (Live View Only).

When Nano is first launched it will try to locate a valid license file, if no license file is found then the below menu will appear.

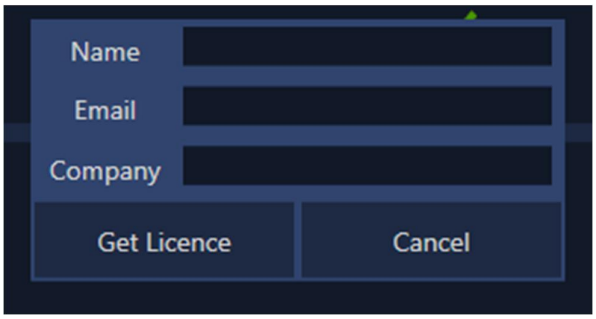
(Figure 1.1 licensing splash screen)

Here you can specify which version of Nano you would like to license.

To fully license Nano, select from the options above:

- Nano A - Nano 4
- Nano B ï Nano 9
- Nano C ï Nano 20
- Continue Unlicensed ï Nano 4 without PTZ and NVS recording features. (see nano 4 spec)
- I already have a licence file ï If you already possess a valid licence file and is located in the correct directory.

When selecting Nano A, B or C, a text box appears for you to fill in your contact/personal information.



(Figure 1.2 License application)

Once completed, select ó Get Licenceô This will generate an e-mail with the information you have provided along with the Workstation ID of your PC. (A valid internet connection and email client will be required). The Workstation ID is needed to create the Licence file.

Licensing Nano Offline

If you do not have an email client and or internet connection you will have to run Nano unlicensed to be able to access the installation code. We ll need this to process your license application.
Once Nano has loaded you will need to click the ó Show Licensing Informationô icon in the top right hand corner of the application.

(Figure 1.3 – Show Licensing Information)

Here you can manually copy the licensing code which you can save to a text file and manually email to us at a later date.
All license requests should be emailed to Nano@meyertech.co.uk.

(Figure 1.4 – Workstation ID)

Once we have received the e-mail, we will generate your license file and e-mail you back with an attached licence.

To activate the license, copy the file (.lic) into the default Nano folder.
This should be located in **C:\Program Files\Meyertech\Nano** (32 bit Windows) or **C:\program files (x86)\Meyertech\Nano** (64 bit Windows).

Section 1 - System Overview

Nano is a Native Profile-S and a Natural Profile-G ONVIF Network Video Client (NVC) designed to run on Windows 7 or later.

With Nano NVC you can view live ONVIF streams, control PTZ ONVIF cameras, select and program camera Presets and record video footage.

Nano is product created by Meyertech.
Nano is the first Video Management Software (VMS) application created specifically for small ONVIF camera networks.

The Nano GUI is simple to use and will not require any training.

Nano has been designed for small ONVIF camera networks and is ideal for:

- Retailers
- Stadia
- Private Dwellings
- SME business premises
- Entertainment venues
- Restaurants
- Offices
- Bars + Clubs

Section 2 - Getting Started

Local Configuration

Nano has two features that require local configuration.

1. Saving sessions will require the user to set the desired directory path.
2. Recorded Video Clips will also require the user to set the desired Location to store the recordings.

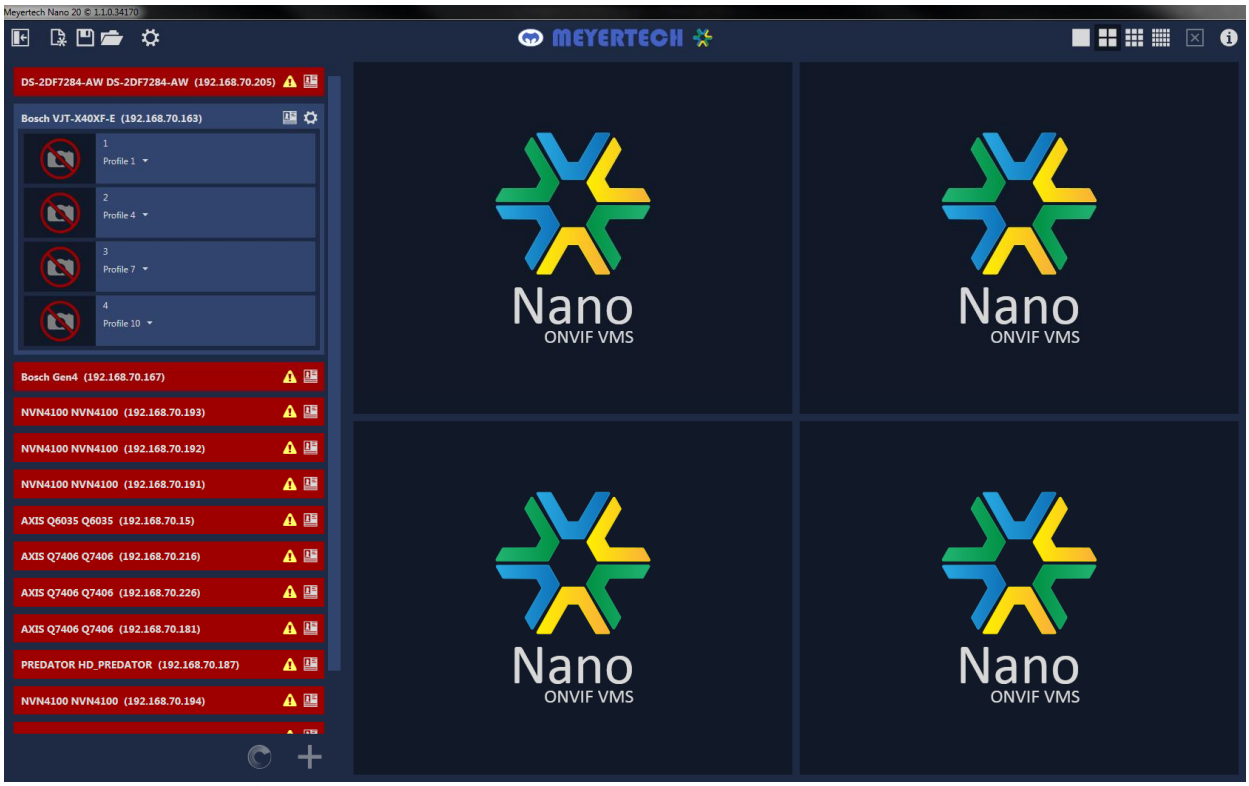
Enabling ONVIF

ONVIF is enabled by default and Network Video Transmitters should be automatically discovered providing: -

1. The NVTôs have been enabled for Onvif discovery.
2. There are no restrictive firewalls in place.

To start Nano, double click the shortcut on the PC desktop.

On start-up Nano will automatically discover NVT devices on the network.

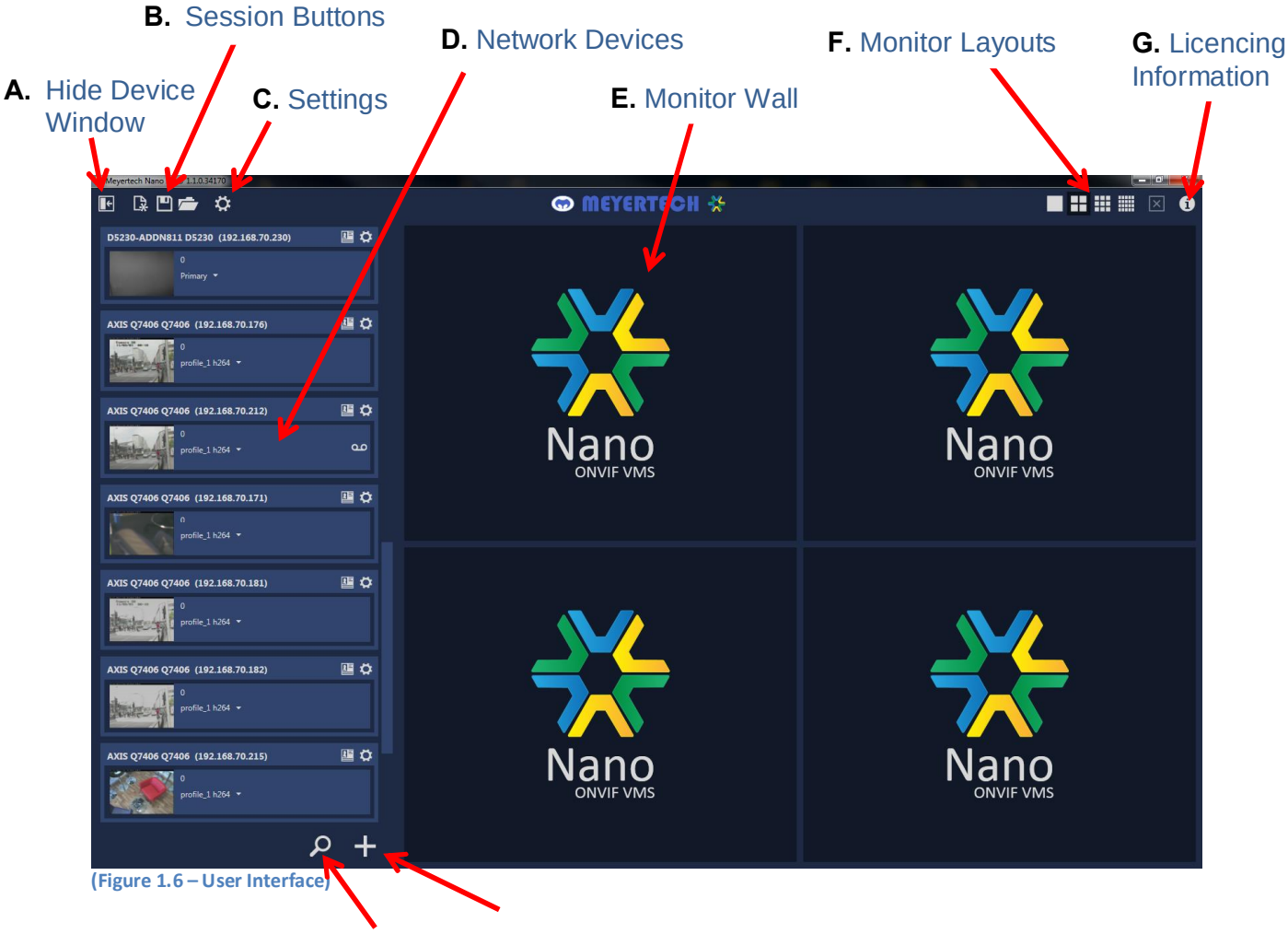


(Figure 1.5 – Nano start-up)

When Nano loads without a session being previously loaded, it will discover the permitted amount of devices that the licence is set for. The devices discovered are determined by which were fastest to respond to Nano.

Section 3 - The User Interface

Nano has been designed to offer a very stylish and user friendly interface that allows a user to quickly discover and configure Onvif devices. Once devices have been discovered, Nano will load its ódefaultô layout window.



(Figure 1.6 – User Interface)

A. Hide device window ï Clicking the óHide Device Listôoption will remove the network devices list and maximise the Monitor Wall to full screen mode.

B. Session Button ï You can save particular ósessionsôor device layouts so it makes it quicker to access the cameras you require at a later date. Here you can Save a session, Load a session or start a New Session. *(Please refer to Section 8.1 – Saving Session)*

C. Settings ï Here you can set specific setting for Sessions and Recording. (See sections 8 and 9)

D. Network Devices List ï When Nano loads it will automatically discover Onvif compatible devices on the network and list them in the Network devices list. Here you can navigate through each particular Onvif object and also access the configuration for the devices. To view a device, drag the object onto the Monitor Wall.

E. Monitor Wall ï Here is where the devices images are presented. You can have a number of different devices showing at once, depending on how the screen layout is set. You can also control your PTZ cameras within the Monitor Wall. (For PTZ controls please see section 6).

F. Monitor Layouts ï Here you can select the number of video windows you want to display at the same time. There are three layouts to choose from 1x1, 2x2 or 3x3.

G. Licencing Information ï This is where your license status and your workstation ID are found.

H. Discover Devices ï Select to force Nano to search for network devices. (Please refer to Section 4.1 ï Advanced device discovery).

I. Add Device Manually ï Here you can add a network device manually by typing the device address and credentials.

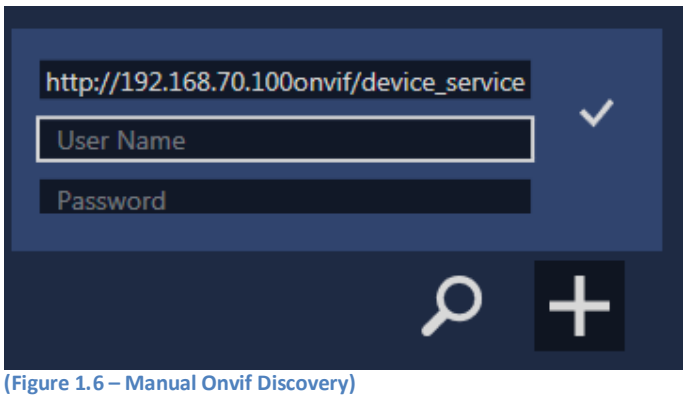
Section 4 - Advanced Device Discovery

4.1 - Manual Device Discovery

Sometimes Onvif devices cannot be discovered using the traditional method over complex IP networks. This is due to the nature of modern day firewalls and particularly corporate networks.

Nano discovers Onvif devices by using WS-Discovery. This Protocol allows clients (NVC) and devices (NVT) to communicate. When Nano loads, it will use WS-Discovery to send probing messages across the network to the NVTôs. If the device supports Onvif, then it will send a message back Nano.

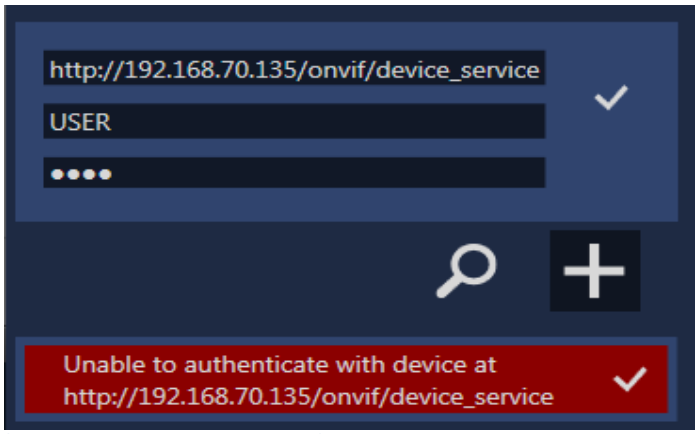
Nano will allow you to bypass the traditional Onvif discovery method if the networks are becoming a problem. A number of complications could obstruct the discovery of NVTôs.



(Figure 1.6 – Manual Onvif Discovery)

1. Select the Add Device button.
2. In the óAdd Device Manuallyôwindow to type in the address and credentials for the Onvif device service.
3. Select the Tick Button or hit the Enter key to add the device.

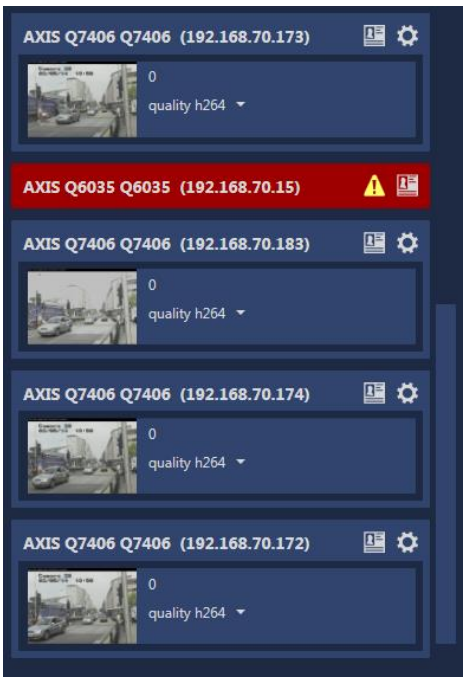
If the Device address or credentials are entered incorrectly then Nano will display an error message.



(Figure 1.7 – Authentication error)

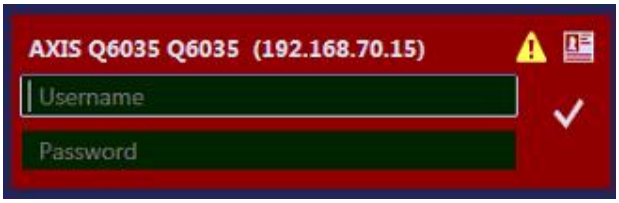
4.2 - Authenticating Devices

Nano allows users to authenticate devices that have pre-configured security credentials. If a device has been discovered but needs to be authenticated, the device will be shown in red in the device window list.



To authenticate this device, select the Edit Username and Password button.

Then type the correct device credentials and select the authenticate button.



(Figures 1.8 + 1.9 – Device Authentication)

Section 5 - Monitor Wall Configuration

5.1 - Monitor Wall Layouts

Nano allows the user to select a number of pre-determined screen layouts.

Within the screen layout buttons located at the top right-hand side of the user interface, you can change the wall layout.

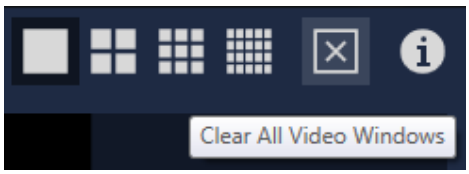
(Figure 2.0 - Monitor Wall Options)

These buttons let you change your view from a 1x1 grid, 2x2 grid, 3x3 grid and a 5X4 grid.

Figure 2.1 – Monitor Wall Layouts

5.2 - Clear Monitor Wall

To remove the Device profiles selected to the monitor wall, select the Clear Windows button located at the top right-hand side of the user interface.

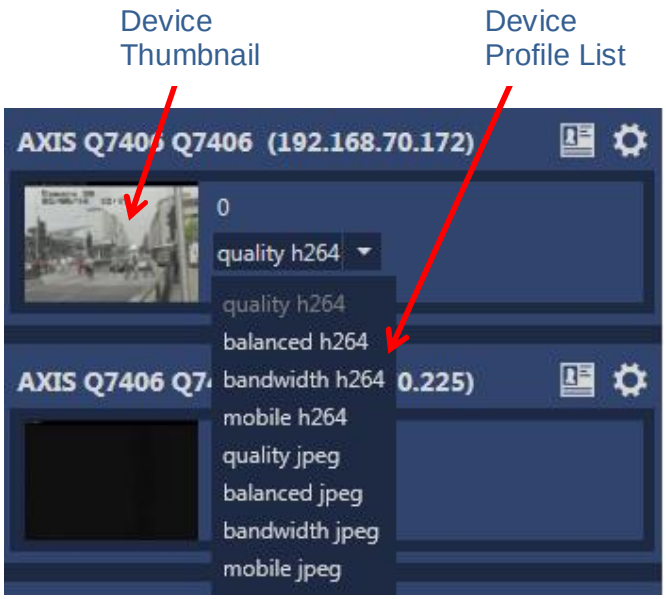


(Figure 2.2 – Clear Monitor Wall)

5.3 ï Select different device profiles

Within your list of discovered network devices the video profiles are displayed next to the devices thumbnail.

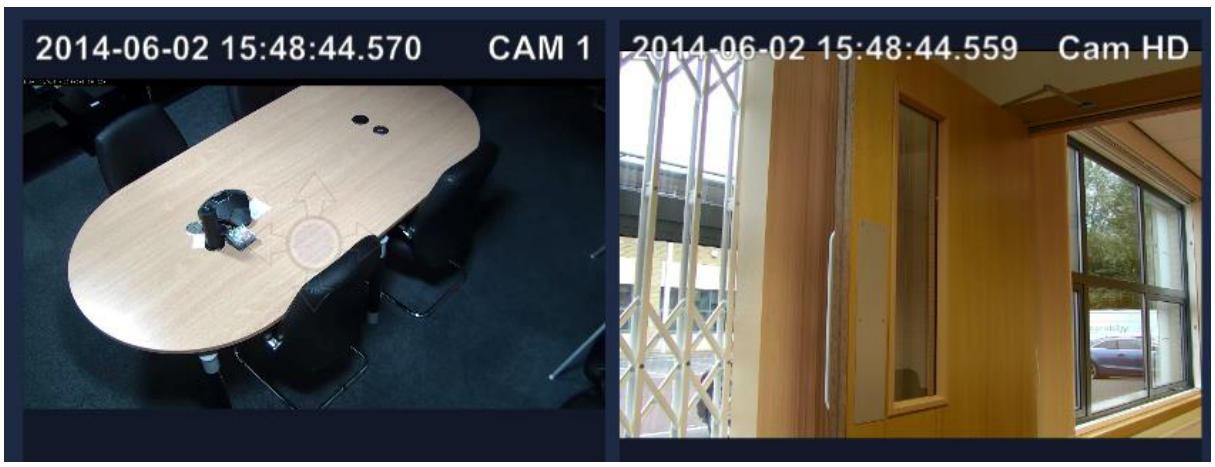
To view a certain profile, select form the drop-down box next to the thumbnail image. Then simply drag and drop the deviceôs thumbnail profile onto the Monitor Wall.



(Figure 2.3 - View device profiles)

5.4 - Monitor Wall Text

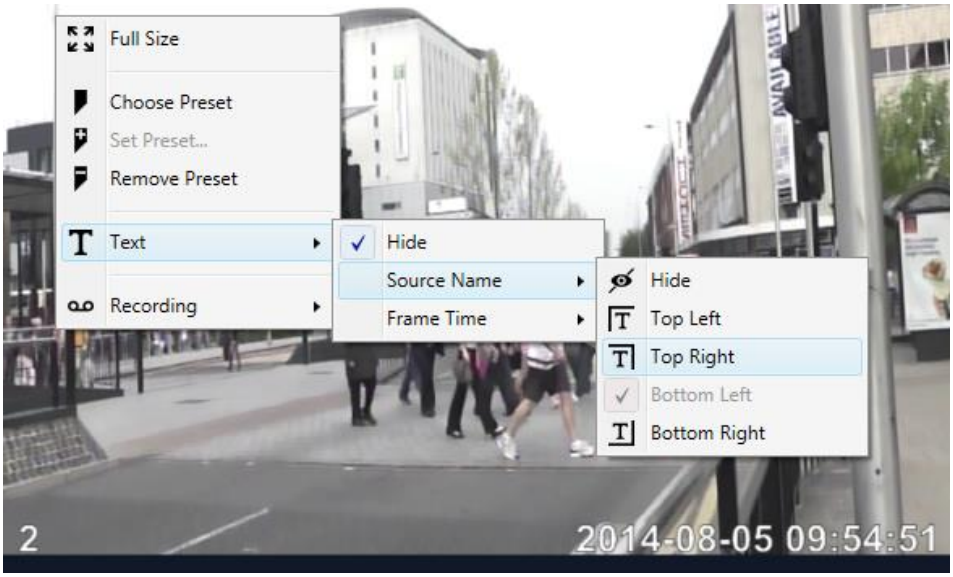
Nano has the capability to show the device Frame time, Date and Source Name on the Monitor Wall.



(Figure 2.4 – Monitor Text)

5.4.1 - Source Name

To access the Text configuration parameters you will need to right mouse click on the video image.

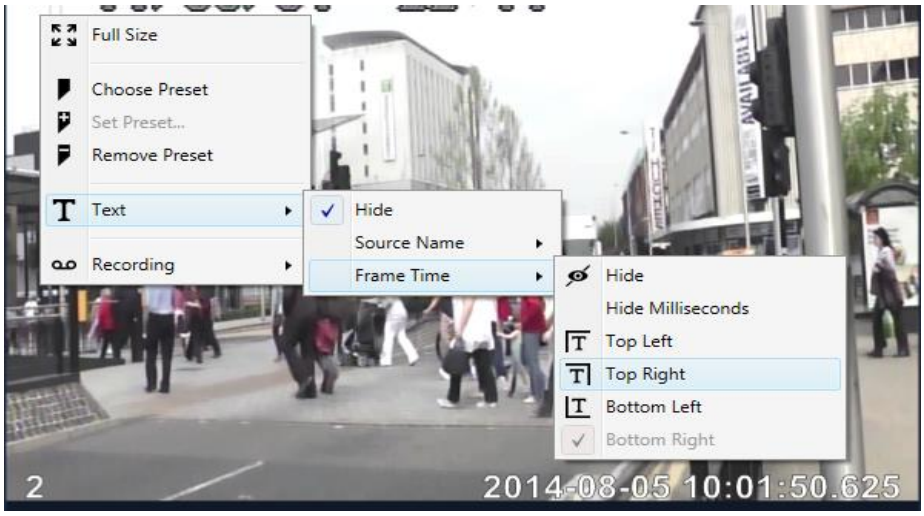


(Figure 2.5 – Source name)

To display the Source, right click on the Monitor Wall and select Text > Source Name. Set the text position accordingly.

5.4.2 Frame Time

You can display the Frame Time of each device on the Monitor Wall. Simply right click and select Text > Frame Time.



(Figure 2.6 – Frame Time)

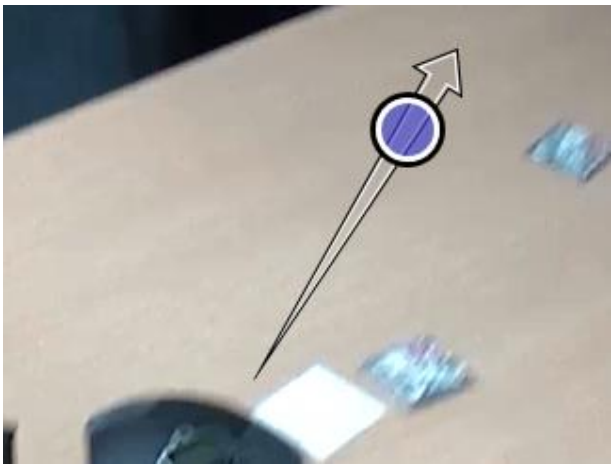
Section 6 - PTZ Devices

6.1 - Controlling PTZ Cameras

To control the PTZ camera, the device should be selected and visible on the Monitor Wall. If a PTZ camera has been selected then a PTZ cursor will be visible over the video image.

(Figure 2.7 – PTZ Overlay)

The PTZ cursor is controllable by dragging the blue centre circle around the screen. The further away from the centre you move the cursor, the faster the PTZ camera moves/rotates.



(Figure 2.8 – PTZ Control)

To zoom In and Out of the image you can use the mouse scroll wheel.

6.2 PTZ Presets

Nano allows users to choose, store and remove presets for ONVIF PTZ devices.

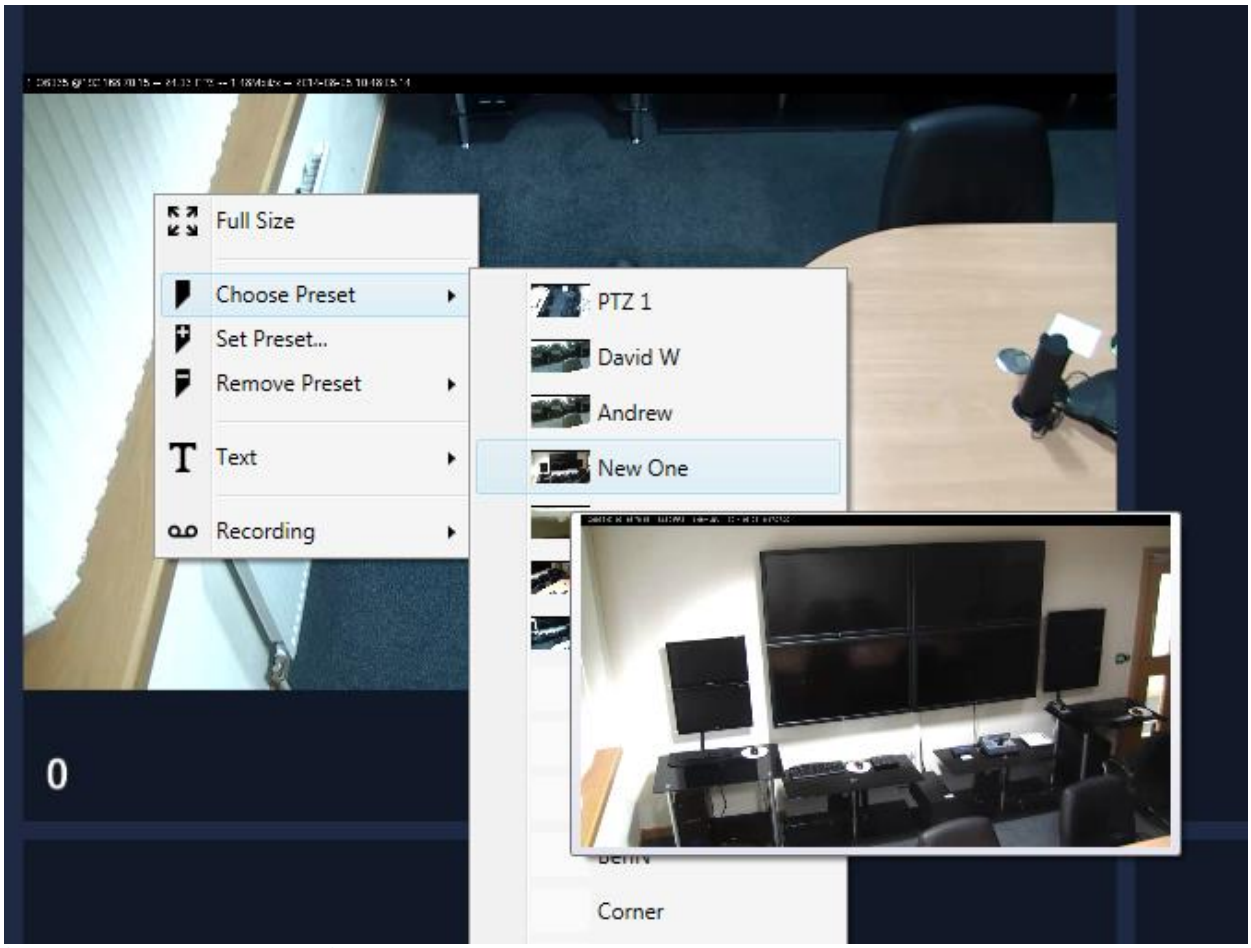
A Preset is a memorized camera location that uses the Pan, Tilt and zoom functionality. When selecting a Preset, the camera will automatically move to a set location.

6.2.1 - Choose Presets

Nano allows users to select presets that are saved on ONVIF PTZ devices.

To view a preset, right click on the Devices Window, hover over the óChoose Presetôtab and select the preset from the list.

Nano will take a snapshot of the presets location once the preset has been selected.



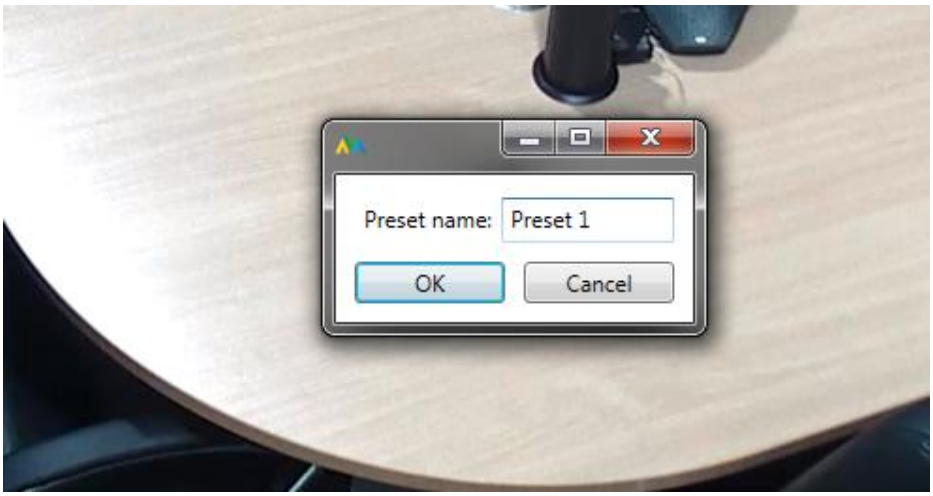
(Figure 2.9 – Choosing PTZ Pre-sets)

6.2.2 - Storing Presets

Nano allows users to store presets on PTZ devices.

To set new presets follow the procedure below:

1. Locate the camera to the precise location for the Preset.
2. Right click on the PTZ devices image and select ó Set Preset...ô
3. Type the name of the Preset into the text box provided.
4. Select OK to store the Preset.

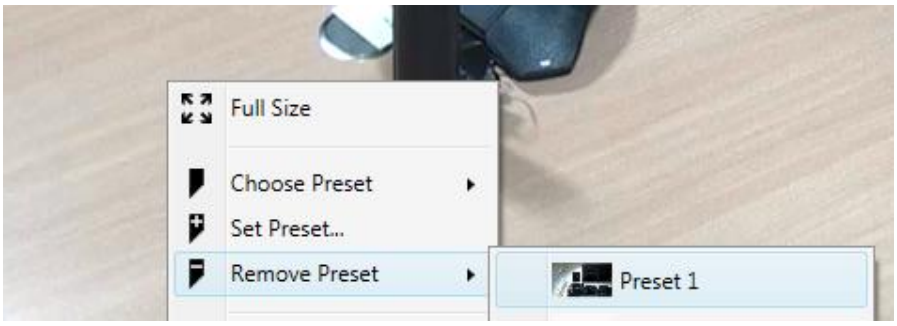


(Figure 3.0 – Programming pre-sets)

Once you have named the Preset it will appear in the Preset list within the ó Choose Presetô tab.

6.2.3 - Removing Presets

To remove a Preset saved on an ONVIF PTZ device, right click on the devices image, hover over ó Remove Presetô and select the Preset you want to remove.



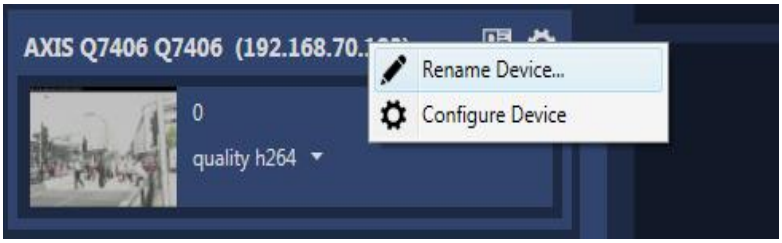
(Figure 3.1 – Removing pre-sets)

A confirmation window will appear to confirm that you would like to remove that Preset.

Section 7 - NVT Configuration

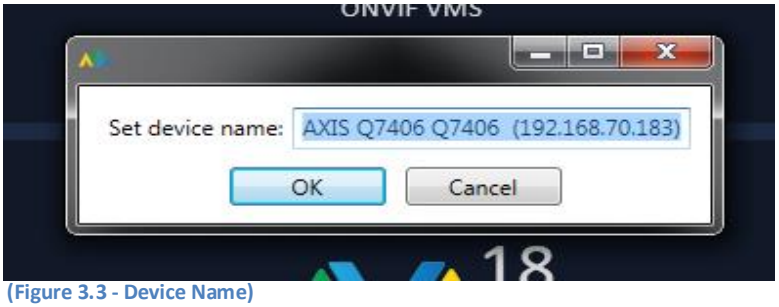
7.1 - Configure Device Name

To configure the name of a discovered NVT device, right click and select Rename Device.



(Figure 3.2 - Rename Name)

Type in the desired name of the device into the text box.

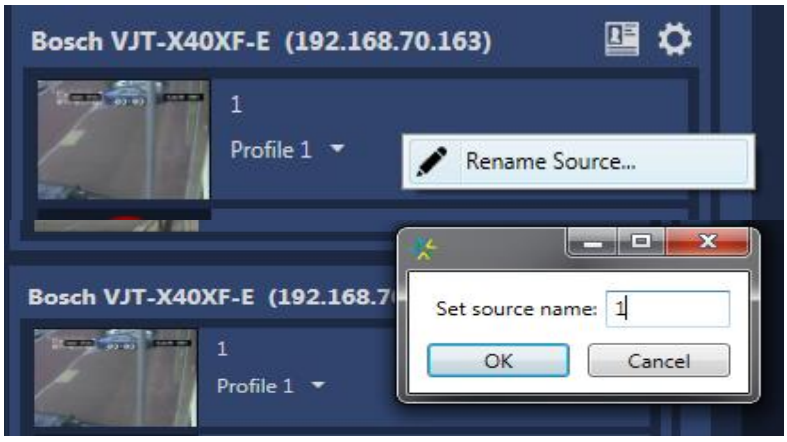


(Figure 3.3 - Device Name)

7.2 - Configure Video Source Name

If the NVT device has more than one video source available then it is also possible to re-name these to something logical.

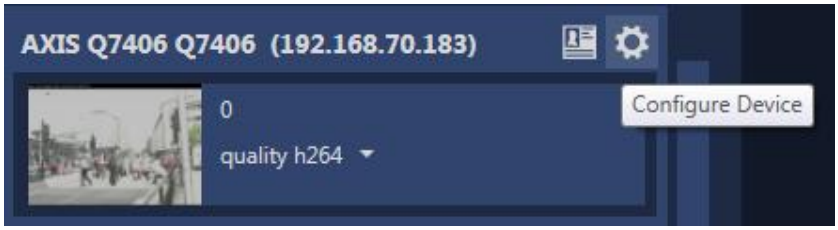
To configure the source name, right click on the desired source, select ÔRename SourceÕ and type in the desired name into the text box.



(Figure 3.4 – Video Source naming)

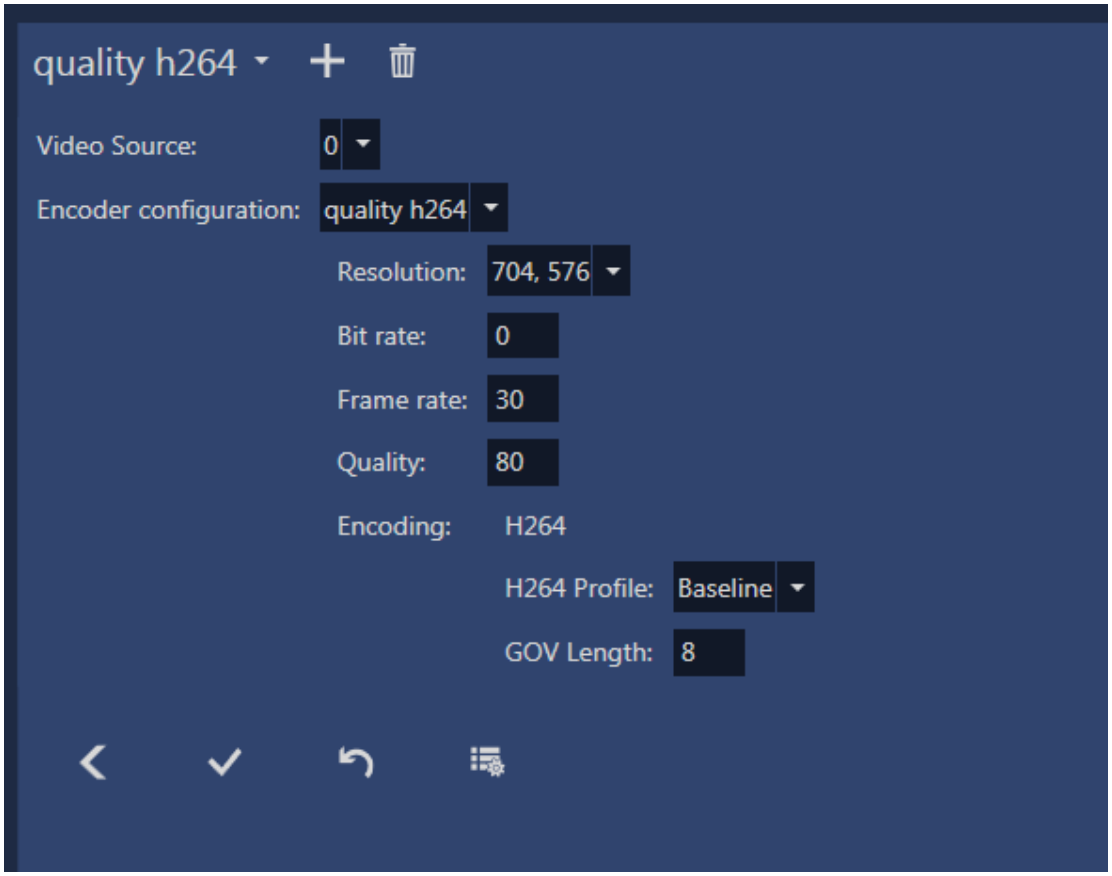
7.3 - Configure Device

To configure any ONVIF camera that has been found on the network, select the Configure Device button.



(Figure 3.5 - Configure Devices)

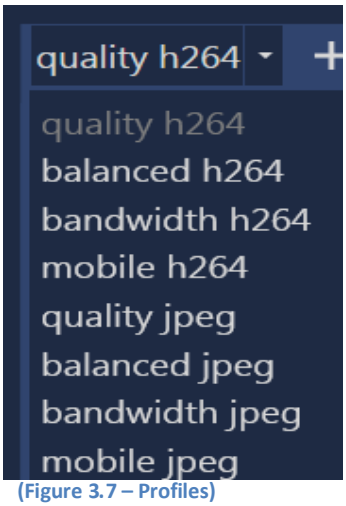
Selecting opens up the device properties window where you can modify device profiles, encoder configurations, view PTZ components, set credentials, view device information and service addresses.



(Figure 3.6 – Device Properties)

7.3 - Modify Device Profiles

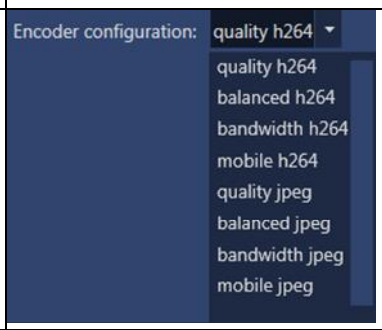
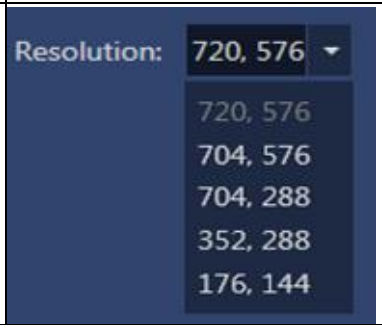
A list of all the profiles that the current device has saved on it is accessible via the profile drop down box. This is located at the top left corner of the configure device menu.



Select the profile to Modify.

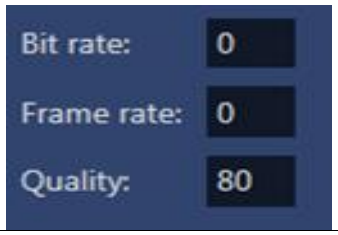
(Figure 3.7 – Profiles)

Once the correct profile has been selected, you can adjust a number of settings.

Video Source A device found on the network may have more than one video source available. (Multiple channel encoder). When changing the device profile, the video source will automatically update. (See section 7.2)	
Encoder Configuration Select the profile which is to be modified.	
Resolution All supported resolutions of the particular device are listed.	

Bit Rate / Frame Rate / Quality

Manually enter the desired values for the video stream settings.

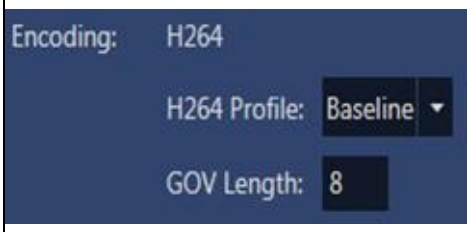


Encoder format settings MPEG/H264

Altering the GOV length is dependent on the speed of your network.

If the GOV length was not set accordingly, then the quality of the video would be affected.

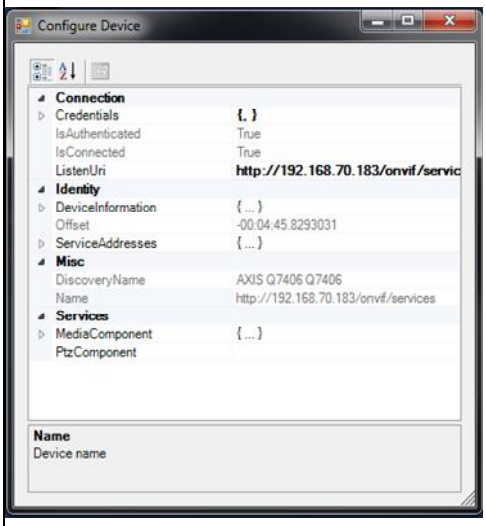
Setting the GOV-length to a high value saves considerably on bandwidth, but there may be noticeable image decay.



Advanced Settings (Competent Users Only)

Within this menu you can view and configure device credentials, PTZ components, device information, service addresses and media components.

To access the settings menu, select the Advanced Settings button.

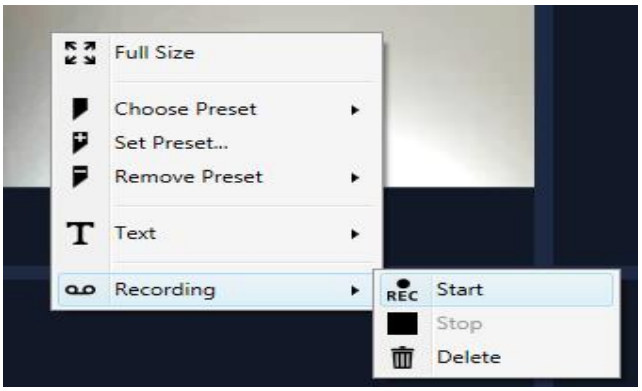


Once you have altered profile properties you can save them by clicking the save button located in the centre of the menu. At any point you want to discard the changes you have made, click on the undo button. To close the Device menu select the Back button. If you are already viewing the profile that you have configured, then the changes will not be visible until you replace or refresh the window.	

Section 8 - Recording

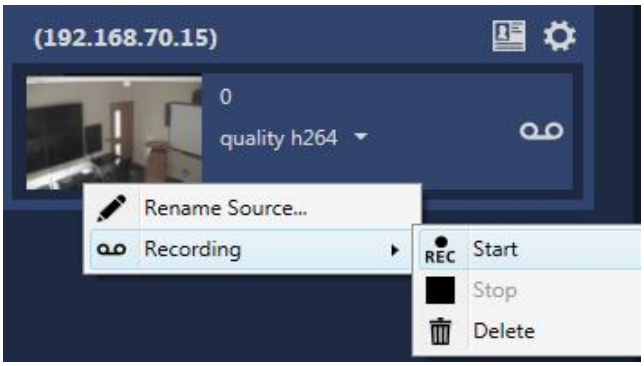
8.1 - Start Recording

To record a video stream, select the device onto the Monitor Wall. Once displayed, right click on the device image and select Recording then Start.



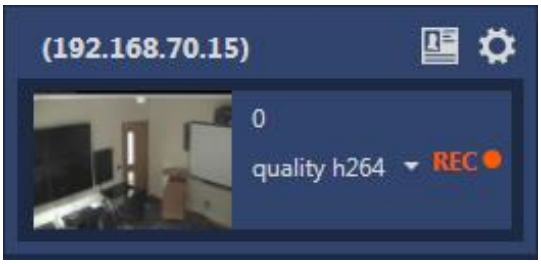
(Figure 3.8.1 – Start Recording)

Alternatively you can right click on the devices thumbnail and select Recording - Start.



(Figure 3.8.2 – Start Recording)

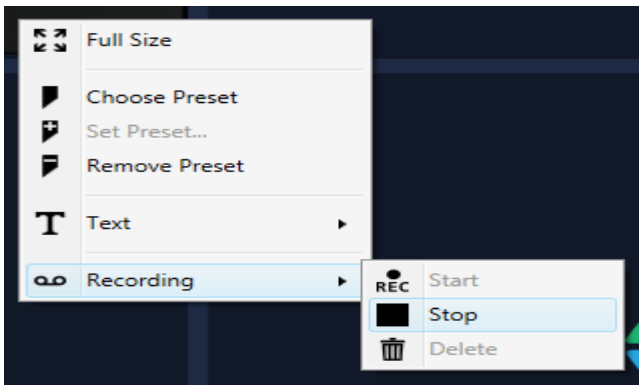
When a device is recording, a Recording icon is shown on the device thumbnail.



(Figure 3.8.3 – Start Recording)

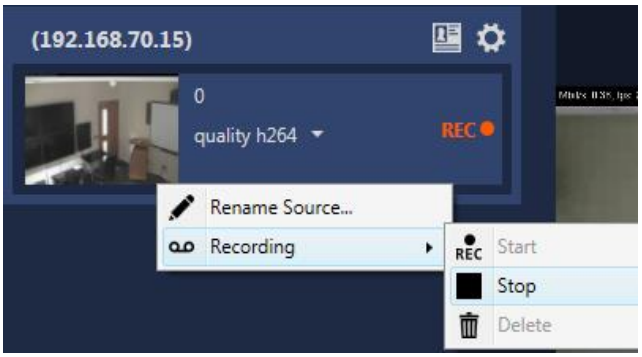
8.2 - Stop Recording

To stop the recording of an NVT device, right click on the devices image and select Recording, then Stop.



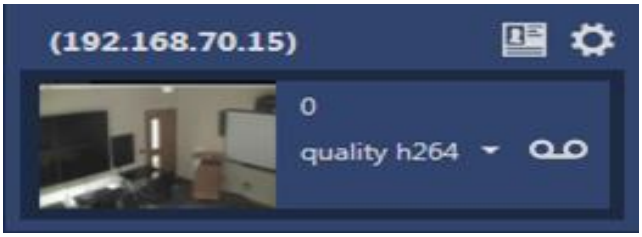
(Figure 3.8.4 – Stop Recording)

Or right click on the devices thumbnail and select Recording - Stop.



(Figure 3.8.5 – Stop Recording)

Once the device has stopped recording, an icon will appear on the device thumbnail.



(Figure 3.8.6 – Stop Recording)

When stopping a recording, a confirmation message will appear to ask whether to stop the recording.

(Figure 3.8.7 – Stop Recording)

When hovering over the recoded icon, the recording usage will appear in the device thumbnail.

(Figure 3.8.8 – Recording Usage)

8.3 - Playback

Simultaneous playback and recording are achievable through Nanoôs powerful GUI.

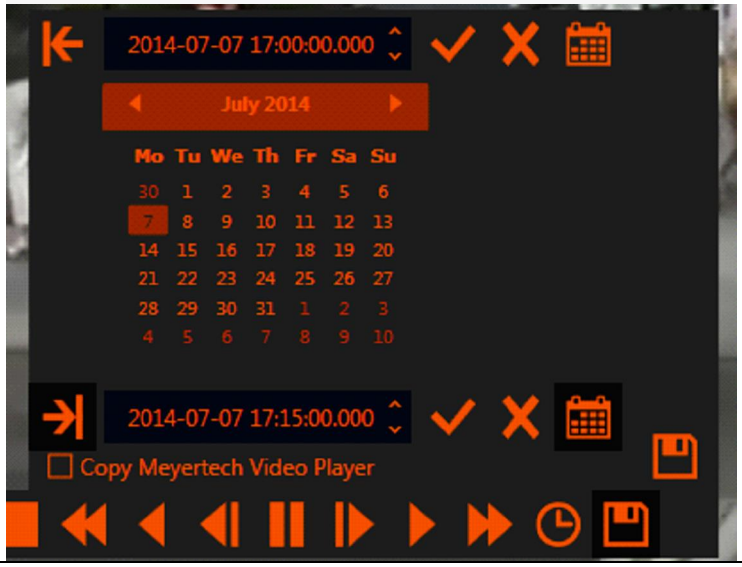
To enter playback mode, select the REPLAY button located on the devices monitor.

(Figure 3.9.1 – Replay)

Once Replay has been selected, the Monitor will be encircled with an orange border.

(Figure 3.9.2 – Replay)

From the on-screen playback menu you can review the recorded footage, Time and date search and also download video clips.

Stop Select the Stop icon. This will stop playback and exit to Live view.	
Rewind The recorded video will be reversed at x4 normal speed. If selected again then	
Reverse play The recorded video will be played in reverse at x1 normal speed.	
Frame Reverse The recorded video will be reversed frame by frame.	
Pause Playback	
Frame Forward The recorded video will be played frame by frame.	
Play The recorded video will be played at x1 normal speed.	
Fast Forward The recorded video will be played at x4 normal speed. If selected again then	
Date/Time Search Use this button to display a calendar and clock where the required footage can be selected.	
Download Clips Use this button to display the clip download window. Enter a Start and End time for the video clip.	 

8.4 - NVS Settings

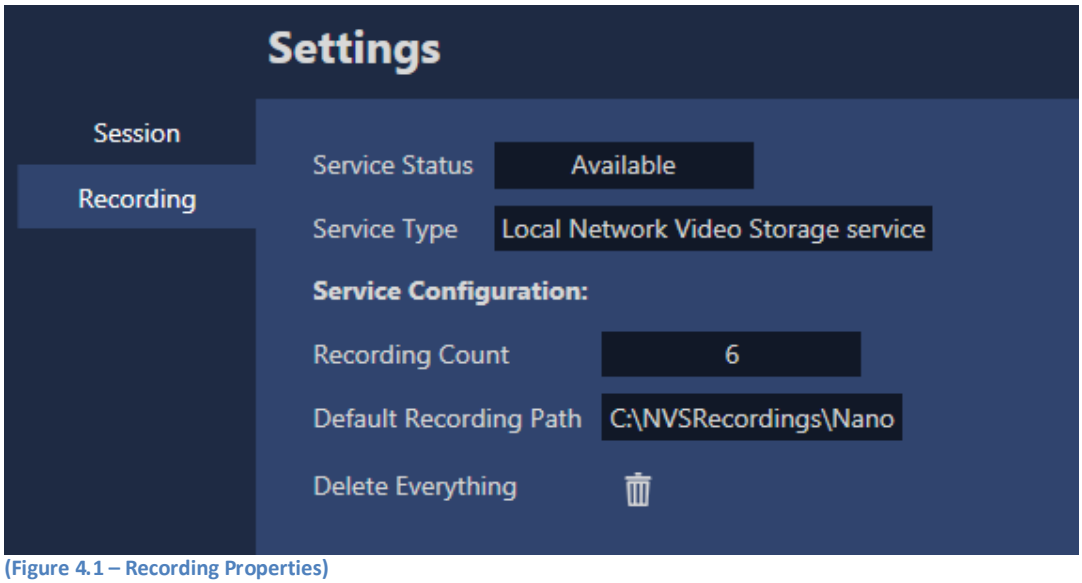
Nano uses an NVS (Network Video Storage) program to record the video. This NVS program is installed automatically with the Nano installer package and runs as a Windows service.

For this program to work correctly, the NVS service needs to be running.

To find this information select the Settings button located in the left hand corner.

Once loaded, select the Recording settings tab.

This will display a menu where you can alter various recording properties.



(Figure 4.1 – Recording Properties)

Service Status ï This indicates if the NVS service is running correctly.

Service Type ï Details whether the video is being stored local or on to a NAS.

Recording Count ï This configuration indicates how many devices have enabled recording in this current session.

Default Recording Path ï This path is where the recordings are saved to. You can alter this file location to a desired path.

Delete Everything ï Select the delete bin to delete all of the NVS recordings on the PC.

Section 9 - Sessions

You can save specific Sessions with Nano so it makes it quicker to access the devices you require at a later date.

Located at the top left-hand corner of the user interface you can; save a session, load a session or start a new session.

9.1 - Saving Sessions

Nano allows you to save sessions, so that on the start-up you can quickly load your preferred layout.

To save your current session, select the save session button in the top right hand corner of the application window.

Give the session a sensible name and choose where you want to save it.

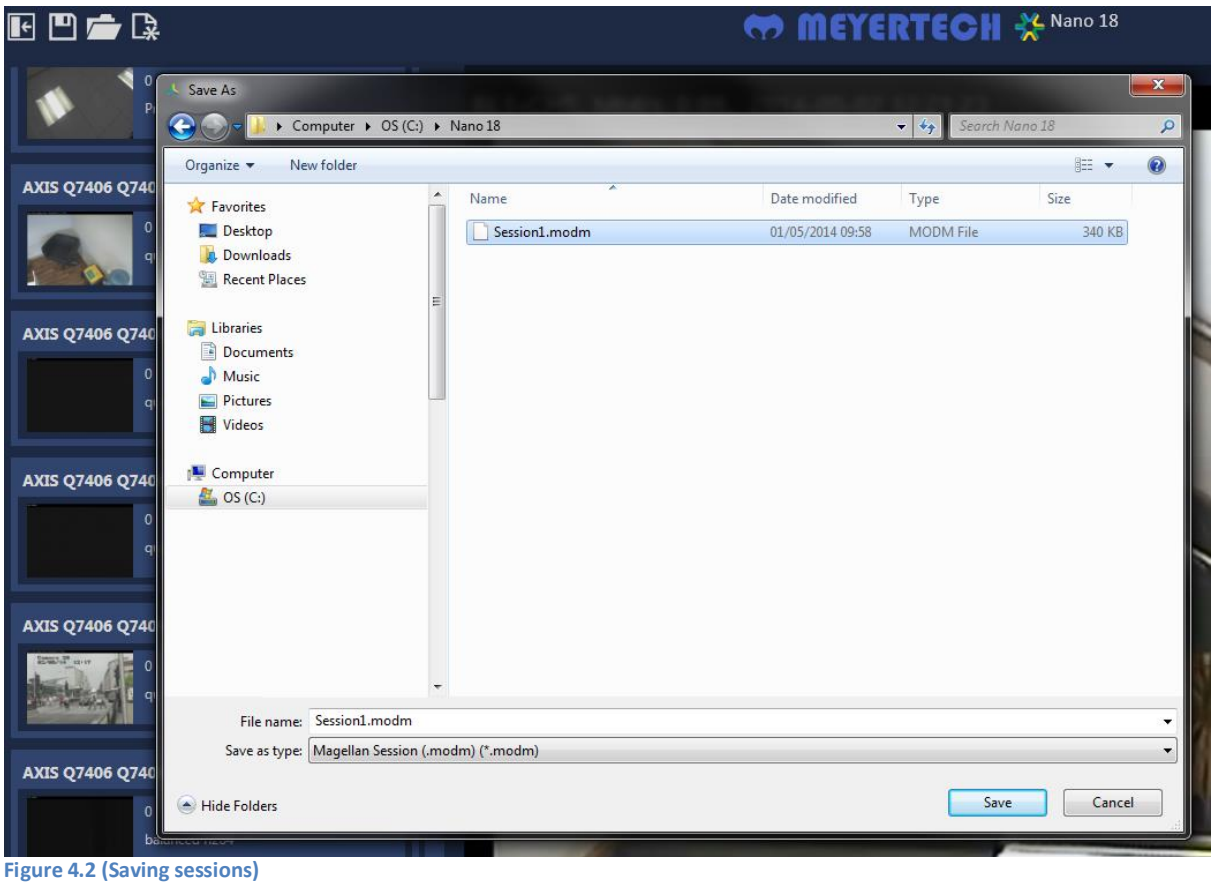


Figure 4.2 (Saving sessions)

9.2 - Recall Session

If you have multiple sessions saved, then you can access them by selecting the Load Sessions button.

Here you can choose from the session you have previously saved.

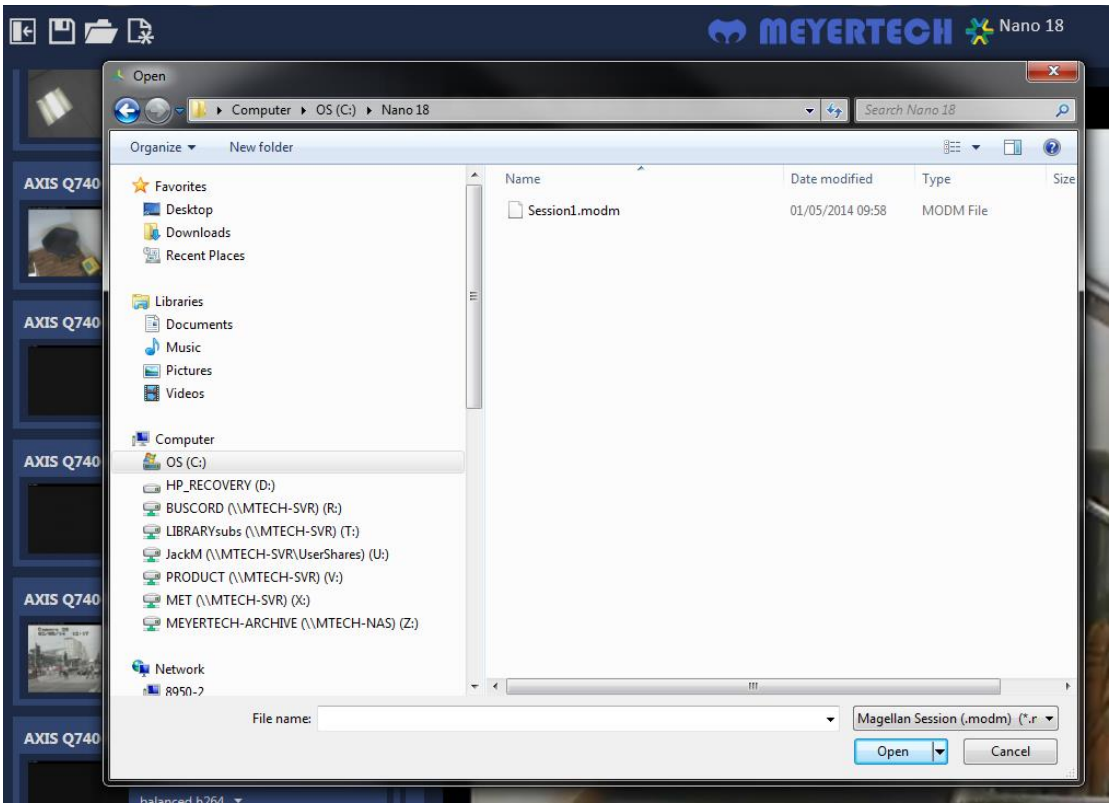


Figure 9.2 (Recall sessions)

Once opened, the current layout will be replaced with the selected session layout.

9.3 - New Session

Selecting the New Session button will clear the ôDevice Listô and remove any device profiles selected on the Monitor Wall.

From here you can now discover different devices or add a device manually.

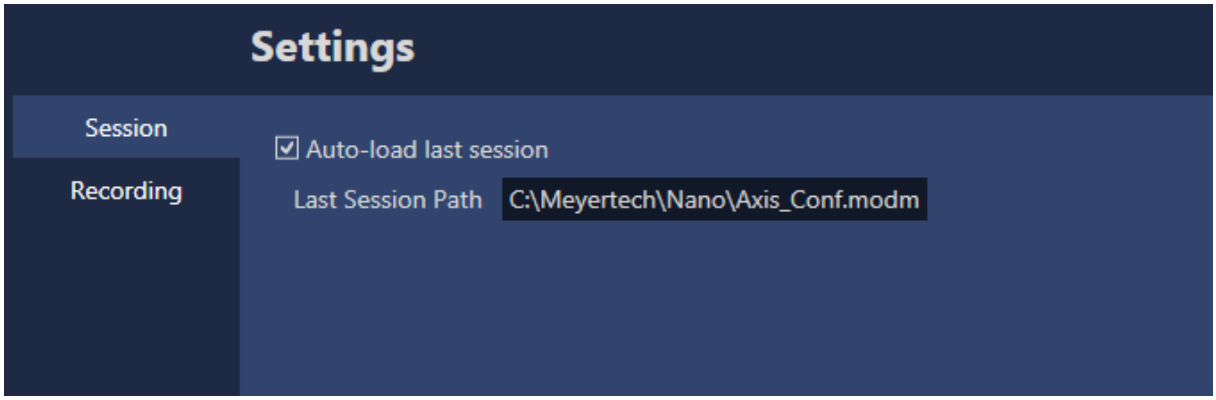
9.4 ï Session Settings

Within the Settings menu you can alter Session options.

To alter Session options, select the Settings button located in the left hand corner.

Once loaded, select the Session menu tab.

This will display a Session menu where you can set whether to auto load the previous session.



To Auto-load the previous session, select the tick box.

This menu will also display the file location of the last session loaded.

Technical Support

Our support team will be happy to help with any problem you may experience relating to the installation or operation of Nano VMS*.

Every new licensed copy of Nano comes with a portion of Support Credits.

To access support for your Nano software open a Support Ticket by visiting our online support portal at http://www.meyertech.co.uk/support.html

*Please note support is not available for FOC unlicensed version(s) of Nano.

Custom Branding

For organisations interested in custom branding Nano Meyertech offers two OEM options for licensed Nano products.

Post-Installation

The Meyertech logo, web site and email address can be replaced after installation by copying a suitable bitmap file and two text files into the Nano installation folder. For example files, please request a post-installation branding pack from Meyertech.

Pre-Installation

The same files and a EULA can be added to a custom Nano installation program by supplying the files to Meyertech.

To discuss this option further, please contact Meyertech sales or email Nano@meyertech.co.uk